

Blasting Applications Using POTTERS BALLOTINI™ Glass Beads

Cleaning with BALLOTINI™ Glass Beads

Benefits

- No measurable amount of metal removed
- No contamination of work surfaces; beads are chemically inert
- Easy cleaning of hard to reach interstices or fillets; wide range of beads sizes available
- Can specify a wide variety of finishes
- Lower energy costs and use vs. other media

Applications

- Cleaning of debris from vats, tubes, trays, utensils, tanks, etc.
- General cleaning of machinery, dies, plates, molds
- Removal of coatings and debris from surfaces
- Maintenance cleaning in engine rebuilding (e.g. pistons, blocks)
- Cleaning of large turbines and engine castings as well as small intricate parts.

Because of the wide variety of different materials which may be removed in cleaning operations, it is often best to experiment with different nozzle angles to find which works more efficiently. Where there are internal recesses and other difficult areas, the use of smaller bead sizes may be particularly helpful. Since a high cleaning speed usually minimizes labor, bead size and nozzle angle are key considerations. Normally, a velocity which optimizes cleaning speed with a given size of bead will optimize the consumption, to give lowest total cost.

Peening with BALLOTINI™ Glass Beads

Benefits

- Resistance to fatigue cracking increased; part life increased
- Process performance precisely controlled
- Low and medium intensity peening intensity achievable
- No surface contamination, post treatment for removal of contamination smears is unnecessary.

Applications

- Peening to reduce stress corrosion cracking of critical areas
- Peening of structural member, gears, shafts, blades, cutting tools, pipes, joints and delicate parts for increased resistance to fatigue and stress corrosion cracking.
- Peening of propellers and hulls for increased resistance to fatigue
- Peening of jet engine components – blades, vanes, valves, spindles, shafts.

Peening to increase fatigue resistance or to increase stress corrosion resistance is essentially a hammering operation. Uniformity of bead size and control of the number of air included, non-round and angular particles is critical to process performance. Glass beads are particularly a good media choice for peening, as they do not contaminate metal surfaces.

Finishing with BALLOTINI™ Glass Beads

Benefits

- Broad range of finishes provided from matte to bright satin
- Specified finished easily reproducible
- High points blended and pores sealed.
- Remove virtually no metal, so critical part dimensions remain unchanged.

Applications

- Broad range of interior decorative finishes
- Blending surface defects
- Etching of printing plates, dies, molds
- Removing defects form molded parts
- Imparting smooth, clean surfaces onto molds

Where appearance is of prime importance, bead size is normally the key consideration. Velocity, nozzle angle and other factors should be adjusted to give maximum finishing speed and to minimize consumption. As a general rule, large bead at high intensities provide a deep matte; at low intensities, large beads give a smooth, bright surface: small beads at high intensities give a dull, matte and at low intensities a bright satin.

Deburring with BALLOTINI™ Glass Beads

Benefits

- Peens down burrs
- No additional metal removal from parts
- Treatment is a one-step, low cost operation

Applications

- Removal of burrs and feather edges from tools, equipment, finished product, etc.
- Deburring and deflashing molded metal and plastic parts
- Removal of burrs from threading equipment and spools
- Deburring dies and castings

The key considerations in deburring are usually a combination of programming surface finish, while achieving sufficient impact energy to remove or depress the burr. Bead size, which governs finish, must be adjusted to an adequate peening intensity with velocity. Proper nozzle angle will optimize consumption.